Rexroth
Bosch Group

CS 550/150RC Towplow

Spreader Joystick Controller Operator Manual

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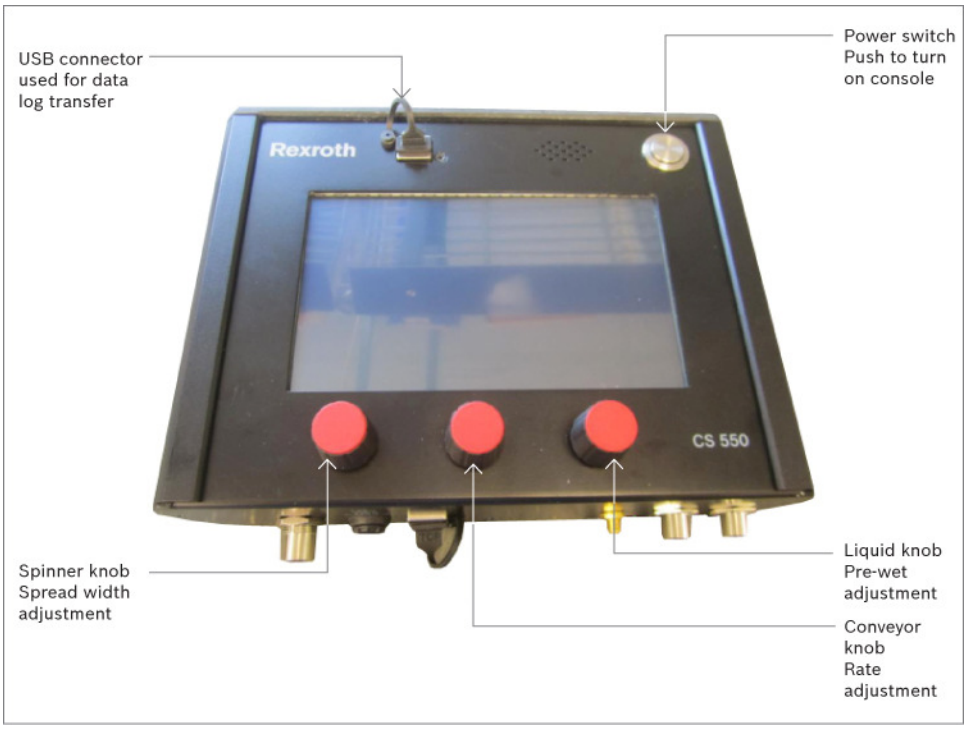
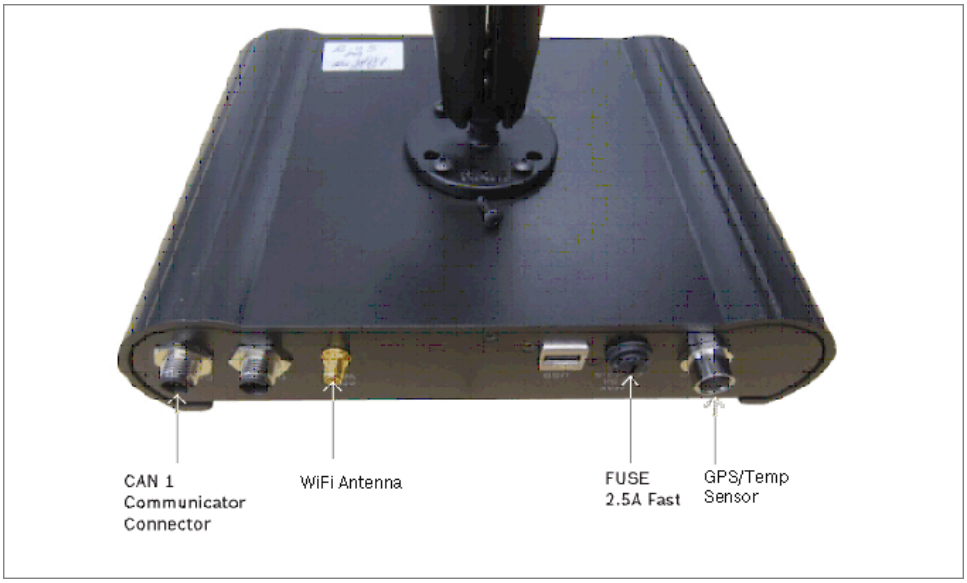
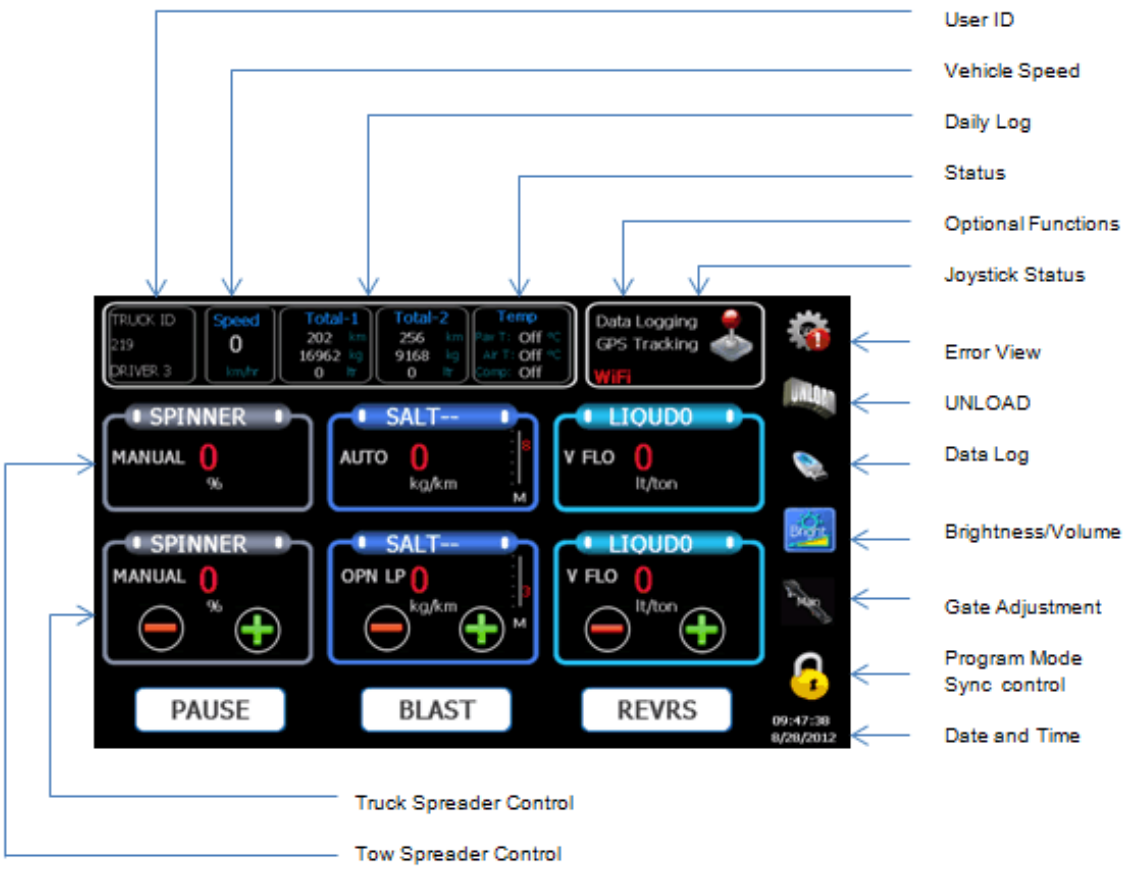
1 Panel Controls

Turn knobs clockwise to increase.





2 Operation Screen Layout

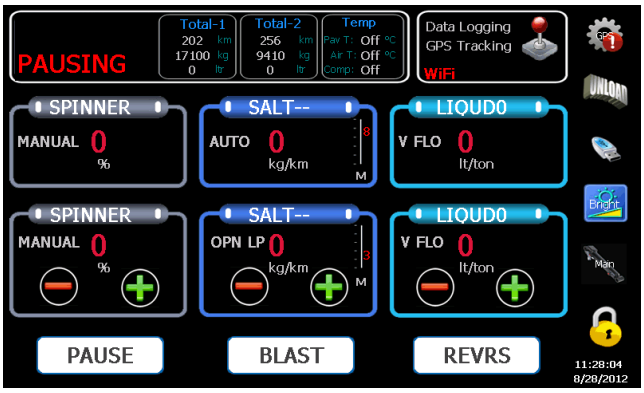


SPNR	SALT - -	LIQUID1
Spinner Label	Solid Name	Liquid Name
Spread Width %	Gate Mode/Solid Rate	Liquid Rate
Spinner Setpoint	Gate Position/Conv Set.	Liquid Setpoint
Spinner Mode	Conveyor Mode	Liquid Mode
Pause Button	Blast Button	Reverse Button

3 Screen Controls

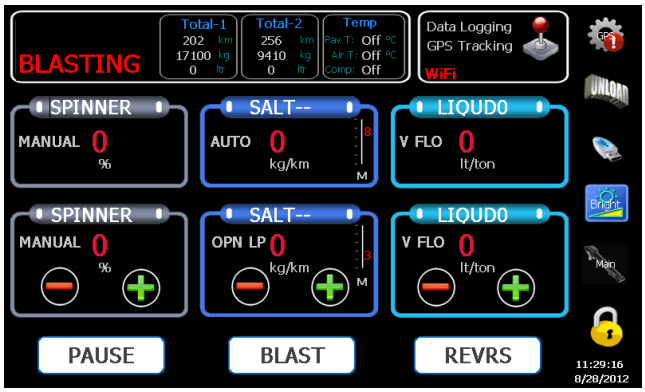
3.1 Pause

Press the Pause button to pause, and press again to resume spreading.



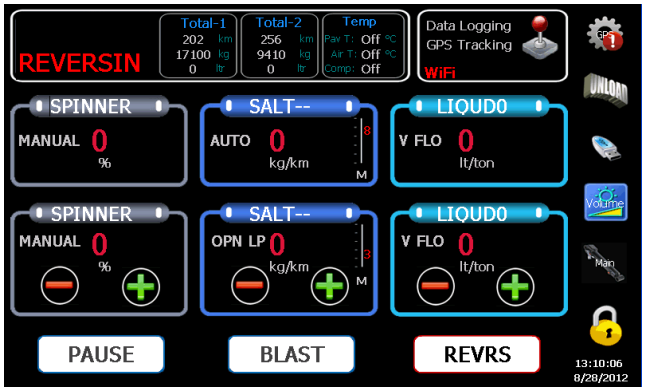
3.2 Blast

Press the Blast button to increase the spreading output, and press again to resume regular rate.



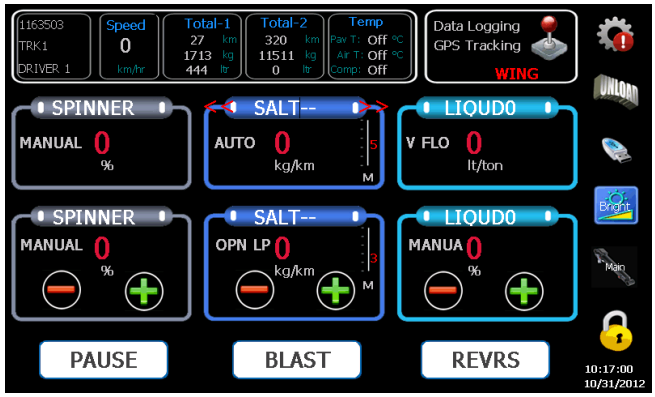
3.3 Reverse

Press and hold the Reverse button to change the direction of the Auger (an optional feature to dislodge obstructions). Release the button to resume spreading.



3.4 Change Solid/Liquid Material

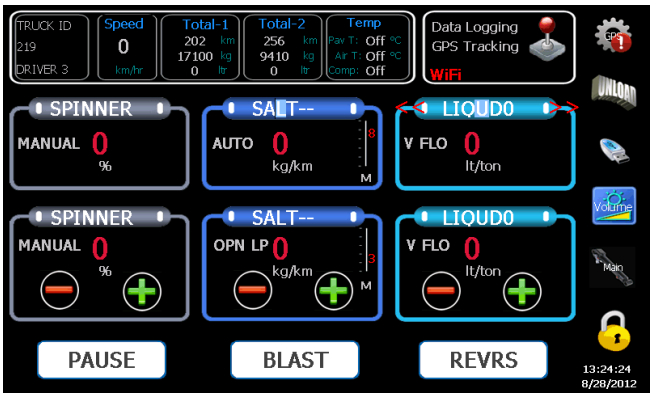
Press the oval button with “SALT- -” text on it to adjust material type. (Note: Vehicle must be stationary) Use the left and right arrows to change.



Use the Left and Right to adjust

Press the oval button again to confirm and save the selection.

Press the oval button with the “LIQUID1” text to adjust the material type. (Note: vehicle must be stationary)

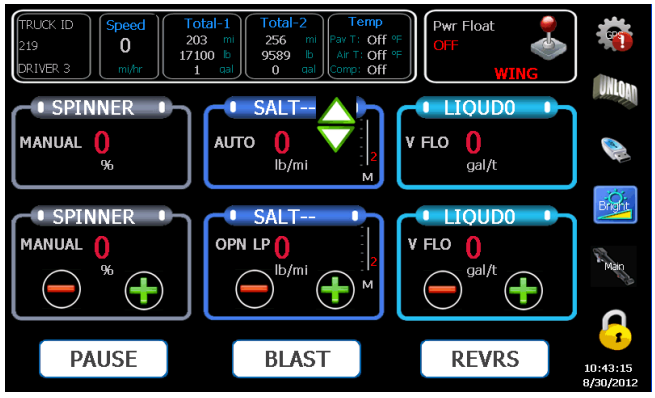


Use the Left and Right arrows to adjust.

Press the oval button again to confirm and save the selection.

3.5 Manual Gate Adjustment

For Manual Gate operation ONLY.



Press the Gate Position Number to select the gate adjustment mode.

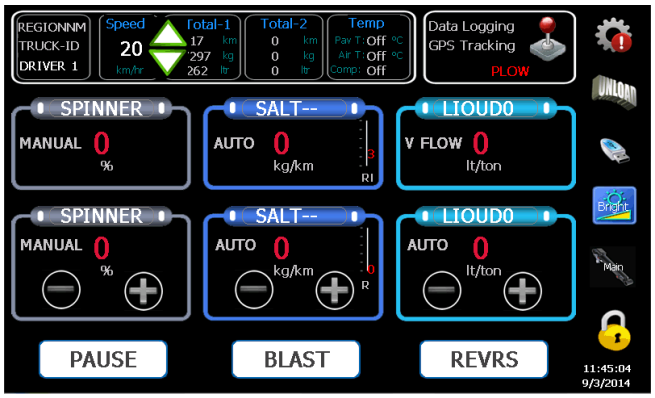
Use the up and down arrows to adjust.

Press the Gate Position again to verify the

selection.

3.6 Simulated Ground Speed

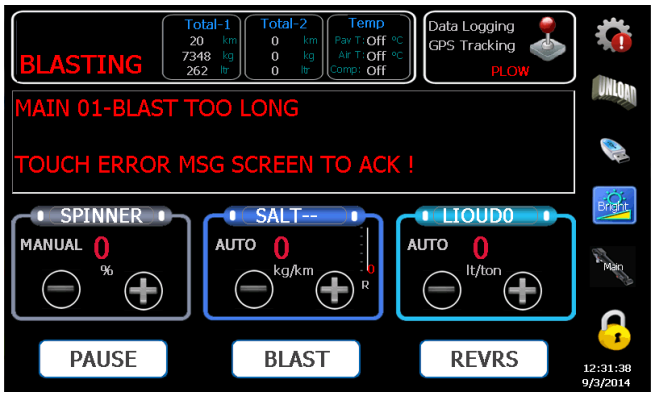
This function is available when a truck is stationary. Tap on the ground speed '**0**', pop up the UP/Dn arrows, press & hold the UP arrow for 5 seconds to enable the simulated ground speed.

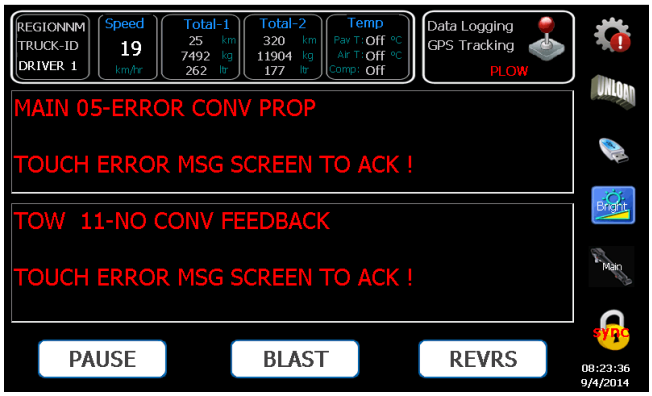


Use the up and down arrows to adjust speed with an increment of 5.

3.7 Error Messages

During the operation when an error occurs, a message will appear in the centre of the screen. Tap anywhere on the message to clear the window.





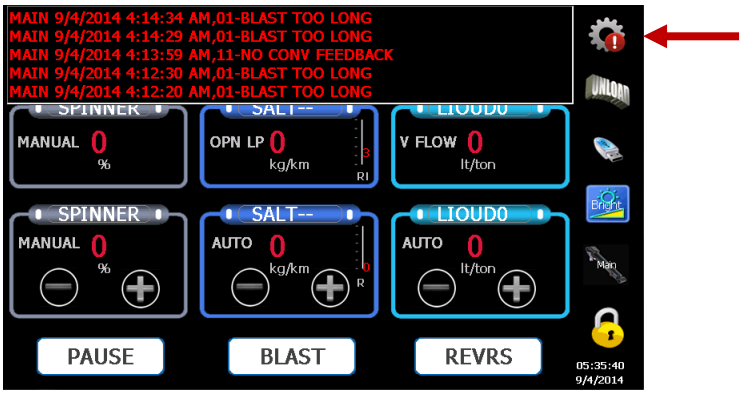
4 Symbol Actions

All symbols on the right of the screen require a press and hold for >1 seconds.

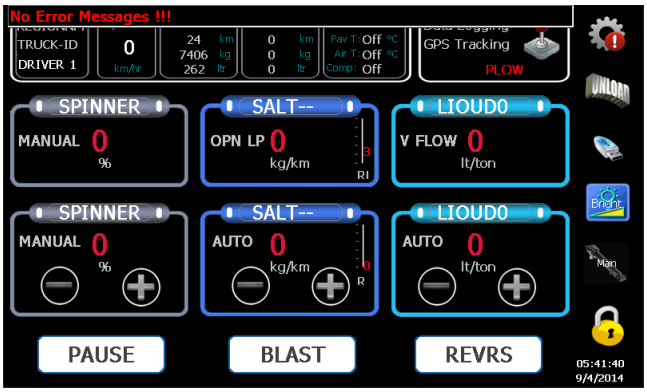
Err/Diag Unload USB Bright/Vol Cylinder Lock

4.1 Error Log/Diagnostic

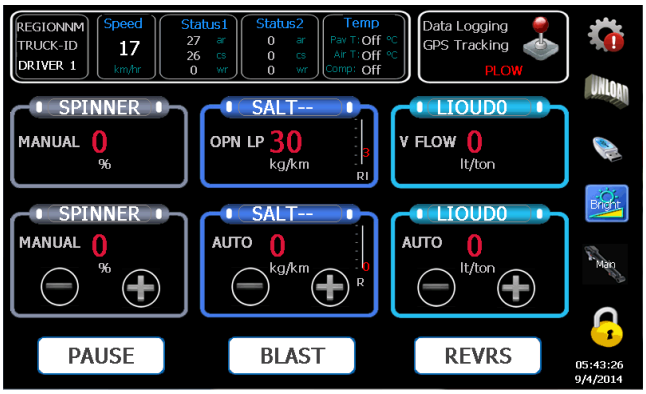
When the vehicle is stationary press the **'Gear'** symbol to display most recent error messages. If a hydraulic pressure&temperature sensor is connected both readings will be displayed on the bottom right of the screen.



A program key is required to clear the error log; hold the button for >5 seconds.

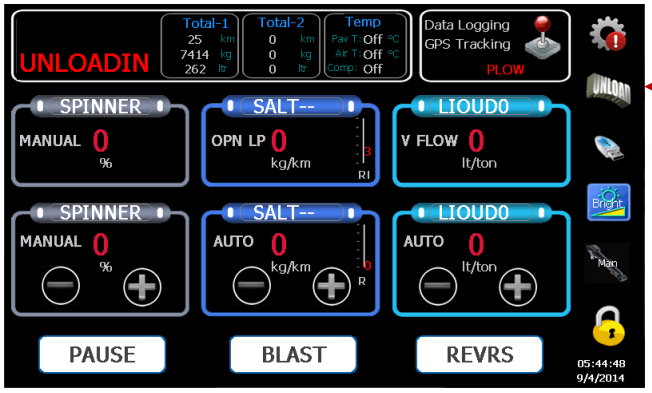


When a vehicle is moving press the **'Gear'** symbol to display the real-time status of spreading.



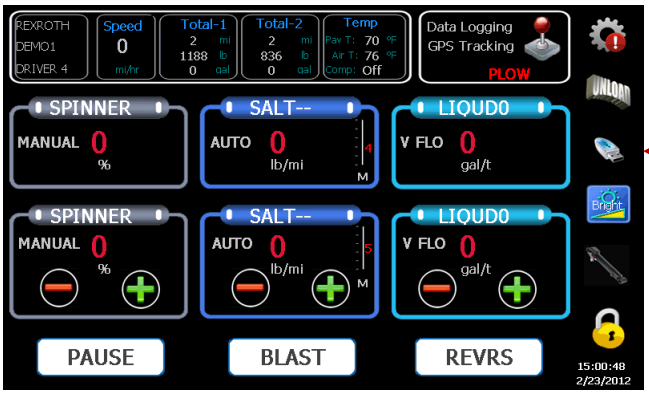
4.2 UNLOADING

Press the **'Unload'** symbol to enter into unload mode. (Note: The vehicle must be stationary.)



Turn the dials until the desired speed is achieved. Press the symbol again and to exit unload mode. Moving the vehicle will suspend the unload process. It will automatically resume when the truck is stopped again.

4.3 Data Retrieval/Clear Trip Summary



With a 'LOG DATA KEY' inserted
Press the **'USB'** symbol to transfer the log data.

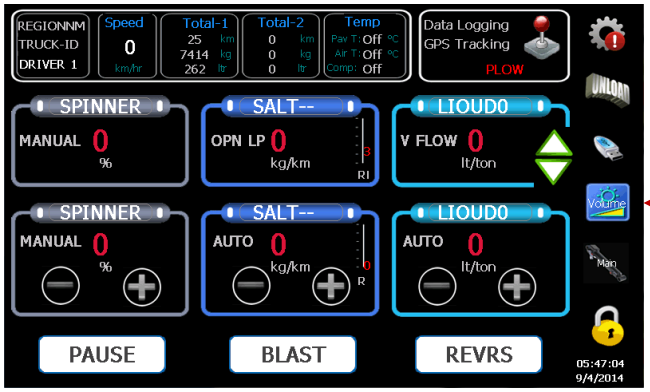
With a 'PROGRAMMING KEY' inserted
Press the **'USB'** symbol to transfer the log data and the parameter. "Transfer Successful" will appear on the screen momentarily when it finishes.

Without a key inserted
Press the **'USB'** symbol to clear trip summary.

Note: 'PROGRAMMING KEY' is for programming and data log. 'DATA LOG KEY' is for log data only.

4.4 Brightness and Volume Adjustment

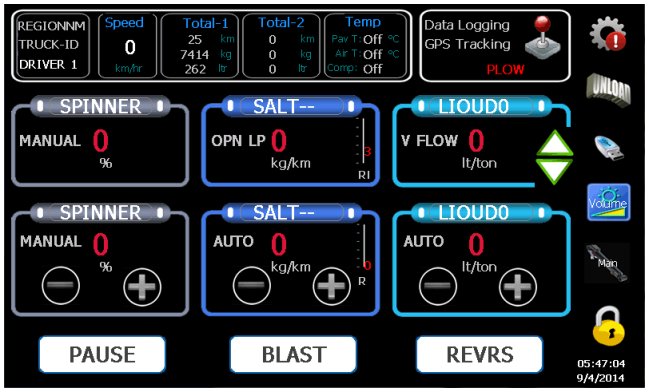
Press the **'Bright/Vol'** symbol to enter into adjustment mode, volume or bright. Press again to toggle the other mode. If 'AutoDimr' is checked in setup the brightness automatically change. Use the up and down arrows to adjust (only adjustable with vehicle stationary).



To adjust volume, the "Vol Adj" needs to be checked on setup user screen.

4.5 Manual Hydraulic Gate Adjustment

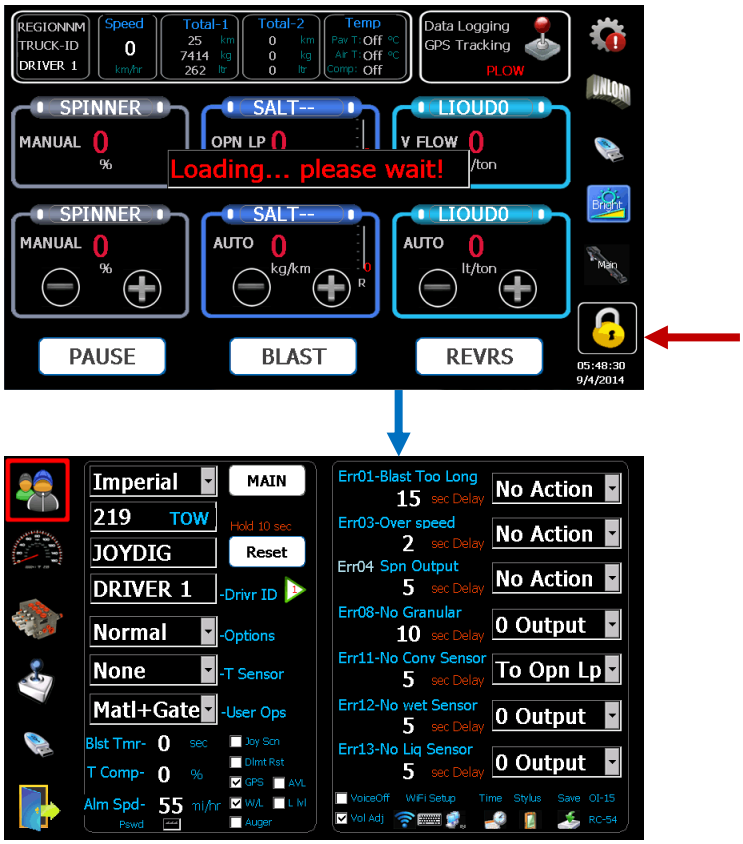
For hydraulic gate operation ONLY.
Press the **'Cylinder'** symbol to select the gate adjustment mode. Use the up and down arrows to adjust.



Press the **'Cylinder'** symbol again to end the gate adjustment.

4.6 Programming Mode

Press the **'Lock'** symbol to enter into programming mode. (Note: A valid 'PROGRAMMING KEY' must be inserted into the USB port.)

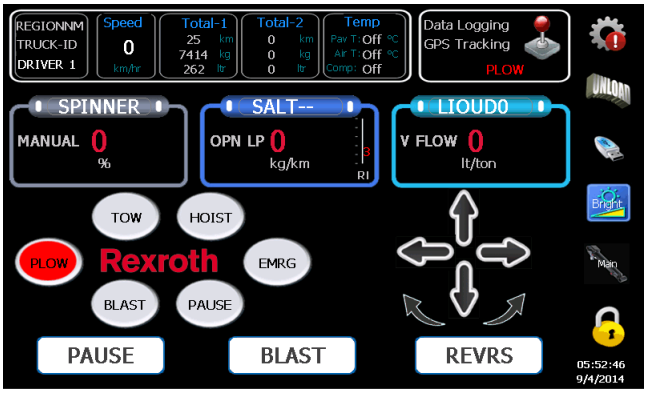


See Calibration Manual for programming details.

5 Joystick Control

For systems equipped with Joystick Option ONLY. The operator Screen flips when the Deadman Trigger is pressed. When the trigger is released, the screen reverts back to the spreader layout.

The oval buttons represent the push buttons on the handle of the joystick. When a joystick button is pushed, the proper mode is illuminated in red.

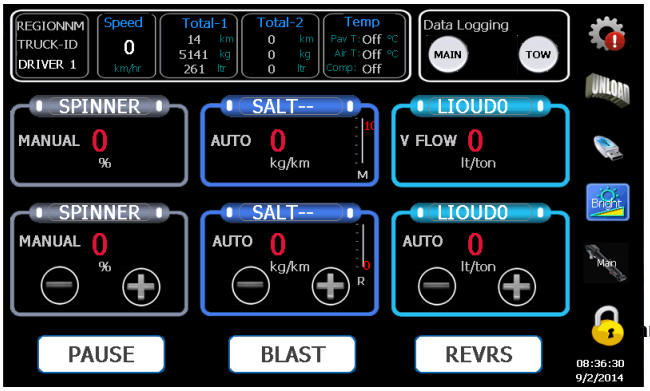


The arrow symbols represent the direction the joystick handle is being deflected. **The mode status is always displayed in the top right of the screens, and a voice readout would clearly tells the Mode selected.**

Note: The default spreader or joystick screen is selectable on USER setup screen.

6 Air Gate Mode

Use the controls on the top right of the screen to control the Air Gate.
When vehicle is stationary click on **MAIN** or **TOW** button to toggle between two materials, and automatically set the operation gate to the calibrated gate for the material selected.



7 Error Codes

Error Messages	#	Suggested Solution
ERROR BLAST TOO LONG	1	Turn off blast, reset timer
ERROR DEICE BLST TOO LONG	2	Turn off blast, reset timer
ERROR OVERSPEED	3	Slow down, reset max speed
ERROR SPIN PROP	4	Check cables, replace coil
ERROR CONV PROP	5	Check cables, replace coil
ERROR CROSS1 PROP	6	Check cables, replace coil
ERROR CROSS2 PROP	7	Check cables, replace coil
ERROR NO MATL DETECT	8	Load material, check sensor
ERROR NO LIQ DETECT	9	Load material, check sensor
ERROR NO GROUNDSPEED	10	Check cable/sensor
ERROR NO CONVEYOR	11	Check cable/sensor
ERROR NO LIQUID	12	Check cable/sensor
ERROR NO DEICE	13	Check cable/sensor
Warning Messages	**#**	**Suggested Solution**
UNLOAD NOT ALLOWED	21	Vehicle needs to be stationary
BB3 SYSTEM ERROR	22	Check if RCE present, Reboot
RC COMMUNICATION ERROR	23	Comm failure between display and RC
RCE COMMUNICATION ERROR	24	Comm failure between RC and RCE
JOY 1 COMMUNICATION ERROR	25	Comm failure between RC and Joystick 1
JOY 2 COMMUNICATION ERROR	26	Comm failure between RC and Joystick 2
NO GATE SENSOR	27	Check gate sensor, cable break
GATE POSITION ZERO	28	Gate closed in READBACK mode
NO GROUND SPEED SIMULATION	29	Speed Simulation mode stopped
UNDER APPLICATION-SPINNER	30	Spinner not able to reach desired RPM
UNDER APPLICATION-CONVEYOR	31	Rate or speed too high, incorrect calibration

UNDER APPLICATION-PREWET	32	Rate or speed too high, incorrect calibration
UNDER APPLICATION-ANTI-ICING	33	Rate or speed too high, incorrect calibration
OVER APPLICATION-COVEYOR	34	Min null or gate too high,
OVER APPLICATION-PREWET	35	Min null too high, rate too low
OVER APPLICATION-ANTI-ICING	36	Min null too high, rate too low
CALIB:GND SPD PULSES TOO LOW	37	Too few or no pulses, recalibrate
SPINNER MAX RPM TOO LOW	38	Bad or no sensor
CONVEYOR MAX RPM TOO LOW	39	Bad or no sensor
PREWET MAX HZ TOO LOW	40	Too few pulses, or sensor failed
ANTI_ICING MAX HZ TOO LOW	41	Too few pulses, or sensor failed
WRONG SPINNER CONTROL MODE	42	Auto null not allowed for MANUAL mode
SPARE	43	Not used
WRONG PREWET CONTROL MODE	44	Auto-null or volume calibration not allowed
WRONG ANTI-ICING CONTROL MODE	45	Check Anti-icing or Cross-Conv modes
WRONG CROSS-CONVEYOR MODE	46	Check Cross-Conv mode setting
WT/REV TOO LOW	47	Check conveyor sensor, and calibrate again
WT/REV TOO HIGH	48	Check conveyor sensor, and calibrate again
PREWET PULSES/GAL TOO LOW	49	Check prewet sensor, and calibrate again
PREWET PULSES/GAL TOO HIGH	50	Check prewet sensor, and calibrate again
ANTI-ICING PULSES/GAL TOO LOW	51	Check anti-icing sensor, and calibrate again
Warning Messages	**#**	**Suggested Solution**
ANTI-ICING PULSES/GAL TOO HIGH	52	Check anti-icing sensor, and recalibrate
SPNR WIDTH AT 0 RPM TOO LOW	53	Check spinner sensor, and recalibrate
SPNR WIDTH PER RPM TOO LOW	54	Check max width, and recalibrate
GATE MOVEMENT TOO LOW	55	Range too small (Low -> High)
GATE ZERO IN MANUAL	56	Manual Gate set to 0
GATE AT CALIBRATION TOO LOW	57	Calibrated gate needs tob a non-zero value
SPINNER SENSOR PULSES TOO LOW	58	Spinner sensor pulses 0 or too low
CONV SENSOR PULSES TOO LOW	59	Conv sensor pulses 0 or too low
SPINNER OUTPUT RANGE TOO LOW	60	Range between spn Min and Max too small
CONV OUTPUT RANGE TOO LOW	61	Range between Conv Min and Max too small
CROS CONV1 OUTPUT RANGE LOW	62	Range between Cros1 Min and Max too small

CROS CONV2 OUTPUT RANGE LOW	63	Range between Cros1 Min and Max too small
PREWET OUTPUT RANGE LOW	64	Range between prewet Min and Max too small
ANTI-ICING OUTPUT RANGE LOW	65	Range for anti-icing Min to Max too small
JOY1 OUTPUT RANGE TOO LOW	66	Range between Joy1 Min and Max too small
JOY2 OUTPUT RANGE TOO LOW	67	Range between Joy2 Min and Max too small
REQUIRED CONV RPM TOO HIGH	68	Setpoints too high, incorrect wt/rev
REQUIRED PREWET FLOW TOO HIGH	69	Setpoints too high, incorrect pulses/gallon
REQUIRED ANTI-ICING FLOW TOO HI	70	Setpoints too high, incorrect pulses/gallon

8 Warning

This glass LCD touch screen display has been extensively tested and validated against its intended use. This glass could crack and break if the display is dropped on to a hard surface or receives a substantial impact. If the glass chips or cracks, discontinue use and contact Bosch Rexroth Canada to have it replaced - do not touch or attempt to remove the broken glass. Any misuse/abuse causing damage, whether intended or not, will become the sole responsibility of the owner/buyer which will render the warranty of this product, void.

Notes: